

## ABSTRACT OF THE DISCLOSURE

To ensure uniqueness of a router identifier in routing protocol messages (RPMs), a router determines whether an identifier  $ID_R$  in received RPMs is the same as an identifier  $ID_S$  in RPMs originated by the router. For RPMs having the same identifier, sequence information such as a sequence number is compared with sequence information in the RPM most recently originated by the router, the comparison indicating whether the received RPM appears to have been originated more recently. The rate at which such RPMs are being received is monitored. If the rate is above a predetermined threshold rate, the router infers that another router is using the same identifier, and selects a different identifier for subsequent use. The sequence information preferably includes a checksum calculated over contents of the message including a random number, to ensure proper flooding of each message to other routers that may be using a duplicate identifier.

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